glossary of genetic terms

NEW AUDIO GLOSSARY OF GENETICS MAKES GENETICS EASIER TO UNDERSTAND FOR NON-SCIENTISTS

Today, genetic terms and concepts such as positional cloning, tumor suppressor genes, alleles, and markers have become common in major news events, high school biology classes, popular movies, and even conversations around the water cooler in the workplace.

Until recently, however, there have been few places for the public to turn for help in understanding the science behind these seemingly complicated and often confusing genetic terms. But now all of that is changing: Enter the Glossary of Genetic Terms from NHGRI.

The DIR Office of Science Education and Outreach has created a new multimedia "talking" glossary of genetic terms on the internet. The Glossary provides definitions in clear, non-technical language for nearly 200 terms commonly used when describing research in human genetics.

Now, with only the click of a mouse button, people can hear an NHGRI researcher demystify the meanings of some of the most daunting terms associated with genetics. Terms in the glossary range from more common ones like *DNA*, *gene*, and *chromosome* to less familiar ones such as *linkage*, *phenotype*, and *fluorescence in situ hybridization* (FISH).

Geared toward people with non-scientific backgrounds who want to develop a better understanding of the concepts of modern genetics, the glossary is a powerful resource for people around the globe. Since it is a web-based tool, it is available 24-hours a day from any internet connected computer. The glossary is also designed for use in classrooms and libraries and is available to these users in a CD-ROM version.

"We expect the audio glossary will be used by parents helping their children with their homework, people trying to better understand news stories, families coping with inherited disorders, journalists reading medical literature. The list goes on and on," said Jeff Witherly, director of the Office of Science Education and Outreach.

For each genetic term, the glossary provides a brief written definition and an audio file in which an NHGRI researcher—a leader in the field of molecular biology, genetics, or medicine—explains the term in less than two minutes. Many of the terms also contain professionally designed illustrations that support the written and audio definitions, and most have a phonetic pronunciation guide. Each term also includes a list of other "related" definitions in the glossary that might be valuable in understanding the overall context of the definition.

"The entire glossary is exciting, but the audio definitions are truly the hallmark of the project," said Witherly. "The audio provides an opportunity for some of today's leading scientists to come out of their labs and share their knowledge with the public. We asked each scientist to explain the term as if they were talking with a neighbor or a relative, and the result is a really powerful way to learn more about this very special language of genetic research."

Twenty-four investigators and advisors from within the DIR provided the audio definitions. Links from the glossary connect users to pages where they can view pictures of the contributors, read about their research interests or area of expertise, and peruse a list of their recent publications.

In keeping with NHGRI's mission to educate the public about the research conducted within the institute, each contributor discusses terms that are relevant to his or her specific area of study. For example, investigators studying gene therapy explain terms concerning gene therapy techniques, while researchers studying cancer genetics explain terms like *melanoma* or the *BRCA1 and BRCA2 genes*.

"For a lot of people, science can seem like a bunch of meaningless technical terms, but here people can see the real person behind those terms. They can hear the researcher and really get a feel for what drives the science." said William Pavan, of the Genetic Disease Research Branch, who defines a number of terms related to his studies of the process by which unspecialized cells develop into cells with a specific function—cells of the nervous system, for example.

The glossary is a feature of the DIR's revamped web site which debuted in July 1998. The new web pages offer links to the various labs and offices within the DIR, as well as to other on-line genetics resources and press releases for recent DIR findings.

The glossary is available on-line at: *www.nhgri.nih.gov/glossary/*. A limited number of copies on CD-ROM are available, free of charge, to schools and libraries through the Office of Science Education and Outreach. ●

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